

REMARKS

The Patent Office has apparently misplaced page 48 of the application which included claims 47-50. A replacement page 48 is enclosed herewith. Likewise, the applicant would note that 49 claims were paid for upon filing, providing further evidence that page 48 was initially filed. The applicant has referred to the claim with their original numbering.

The Examiner rejected claims 1-6, 8, 10, 11, 14, 17-25, 27, 38, 40-52, 54, 56, 57, 60, 63-71, 73, 83, 85-87, 89, 90, 92-94, 97, 98, 103 and 104 as being anticipated by Kurematsu, U.S. Patent No. 5,153,752.

Kurematsu et al., disclose a projector that includes a white light source 20 that generates a light beam having at least two light components, an optics array which separates the light beam into one light component polarized differently than another light component. The optics array has dichroic filters, polarizing beam splitters, half wave plate and liquid crystal panels.

All of the embodiments disclosed by Kurematsu et al., include a white light source 20 producing generally randomly polarized light. The projector of Kurematsu et al., is designed in a manner that may receive randomly polarized light, such as the light received by the polarizing beam splitter 21 (FIG. 2). Accordingly, the projector does not require and thus does not disclose a "polarization converter" for use with a light source.

In the event that the Examiner considers part of the optics array to be a "polarization converter" for the projection system, then the polarization converter would be considered the two polarizing beam splitters 21 and 22. The output of the polarizing beam splitter 21 is a light beam of S polarized red, blue, and green light. The output of the polarizing beam splitter 22 is a light beam of P polarized red, blue, and green light. In no case does the polarizing beam splitters provide

polarized light having more than one polarization state. Further, each of the projection systems is designed to receive such uniformly polarized light as the input thereof.

Claim 1 patentably distinguishes over Kurematsu et al., by claiming a polarization converter for use with a light source that generates a light beam having at least two light components, comprising an optics array capable of separating the light beam into at least one light component polarized **differently** than another light component, wherein the one light component and the another light component are within a single light beam. The output of the polarization converter, as postulated of Kurematsu et al., provide light beams where all of the light components are polarized the **same**, namely, either all P polarized or all S polarized.

Claims 2-19 depend from claim 1, either directly or indirectly, and are patentable for the same reasons asserted for claim 1.

Claim 20 patentably distinguishes over Kurematsu et al., by claiming a method of projecting light comprising producing a light beam that is nonpolarized and has at least two light components. The light beam is separated into at least one light component polarized differently than another light component, wherein substantially all of the light beam is transmitted, wherein the one light component and the another light component are within a single light beam. The light beam as a result of step (b) is received and light-component-specific images are provided. The light-component-specific images are projected through a projection lens.

Claims 21-24 depend from claim 1, either directly or indirectly, and are patentable for the same reasons asserted for claim 20.

Claims 25 and 38 patentably distinguishes over Kurematsu et al., by claiming a projection system with a light source for generating a light beam having at least two light

components, wherein the light components are polarized and at least one of the light components is polarized differently than another of the light components, wherein the one light component and the another light component are within a single light beam. Claim 25 likewise claims a projection system and a projection lens.

Claims 26-31 depend from claim 25, either directly or indirectly, and are patentable for the same reasons asserted for claim 25. Claims 39-49 depend from claim 38, either directly or indirectly, and are patentable for the same reasons asserted for claim 38.

Claim 50 patentably distinguishes over Kurematsu et al., by claiming a projection display system using polarized light comprising a polarization converter for use with a light source that provides a light beam having at least two light components where at least one light component is polarized **differently** than another light component, wherein the one light component and the another light component are within a single light beam. A projection system receives the differently polarized light and provides light-component-specific images. A projection lens projects an image combined from the light-component-specific images.

Claims 51-68 depend from claim 50, either directly or indirectly, and are patentable for the same reasons asserted for claim 50.

Claim 69 patentably distinguishes over Kurematsu et al., by claiming a method for converting light comprising producing a light beam of generally white light that is nonpolarized and has at least two light components. The generally white light beam is separated into at least one light component polarized differently than another light component, wherein substantially all of the generally white light beam is transmitted as a single beam, wherein the one light component and the another light component are within a single the light beam. The single beam is separated into at

least two light beams, where the first beam includes light having a first polarization and the second beam includes light having a second polarization, and providing light-component-specific images.

Claims 70-73 depend from claim 69, either directly or indirectly, and are patentable for the same reasons asserted for claim 69.

Claim 74 patentably distinguishes over Kurematsu et al., by claiming a projection display system using polarized light comprising a light source for generating a generally white light beam having at least two light components, wherein said light components are polarized and at least one of said light components is polarized differently than another of said light components, and said at least two components are provided to a projection system as a single beam, wherein the one light component and the another light component are within a single the light beam.

Claims 75-80 depend from claim 74, either directly or indirectly, and are patentable for the same reasons asserted for claim 74.

Claim 86 patentably distinguishes over Kurematsu et al., by claiming a projection display system using polarized light, comprising a light source for generating a generally white light beam having at least two light components, wherein said light components are polarized and at least one of said light components is polarized differently than another of said light components, and said at least two light components are provided to a projection system as a single beam.

Claims 87-97 depend from claim 86, either directly or indirectly, and are patentable for the same reasons asserted for claim 86.

Claim 100 patentably distinguishes over Kurematsu et al., by claiming, in relevant part, that the one light component and the another light component are within a single light beam.

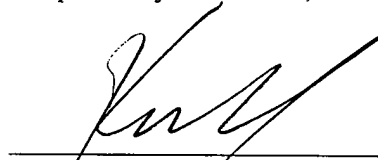
Claims 101-105 depend from claim 100, either directly or indirectly, and are patentable for the same reasons asserted for claim 100.

Claim 106 patentably distinguishes over Kurematsu et al., by claiming, in relevant part, that the one light component and the another light component are within a single light beam.

Claim 107 depends from claim 106 directly and is patentable for the same reasons asserted for claim 106.

The Examiner is respectfully requested to reconsider the claims, in light of the foregoing amendments and remarks, and to pass claims 1-115 to issue.

Respectfully submitted,

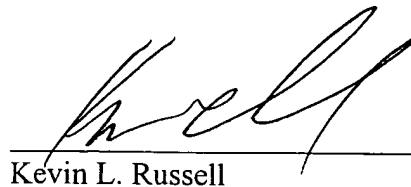


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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Box Fee Amendment, Assistant Commissioner for Patents, Washington, D.C. 20231.

Dated: August 1, 2001


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APPENDIX

In the claims:

- 1. (Amended Once). A polarization converter for use with a light source that generates a light beam having at least two light components, comprising an optics array capable of separating said light beam into at least one light component polarized differently than another light component, wherein said one light component and said another light component are within a single said light beam.
- 20. (Amended Twice). A method of projecting light comprising:
- (a) producing a light beam that is nonpolarized and has at least two light components;
 - (b) separating said light beam into at least one light component polarized differently than another light component, wherein substantially all of said light beam is transmitted, wherein said one light component and said another light component are within a single said light beam;
 - (c) receiving said light beam as a result of step (b) and providing light-component-specific images; and
 - (d) projecting said light-component-specific images through a projection lens.
- 50 (Amended Once). A projection display system using polarized light comprising:

- (a) a polarization converter for use with a light source that provides a light beam having at least two light components where at least one light component is polarized differently than another light component, wherein said one light component and said another light component are within a single said light beam;
- (b) a projection system that receives said differently polarized light and provides light-component-specific images; and
- (c) a projection lens that projects an image combined from the light-component-specific images.

--69 (Amended Once). A method for converting light comprising:

- (a) producing a light beam of generally white light that is nonpolarized and has at least two light components;
- (b) separating said generally white light beam into at least one light component polarized differently than another light component, wherein substantially all of said generally white light beam is transmitted as a single beam, wherein said one light component and said another light component are within a single said light beam; and
- (c) separating said single beam into at least two light beams, where the first beam includes light having a first polarization and the second beam includes light having a second polarization, and providing light-component-specific images.

--74 (Amended Once). A projection display system using polarized light comprising:

- (a) a light source for generating a generally white light beam having at least two light components, wherein said light components are polarized and at least one of said light components is polarized differently than another of said light components, and said at least two components are provided to a projection system as a single beam, wherein the one light component and the another light component are within a single the light beam.;
- (b) said projection system having plural polarizing beam splitters and dichroic filters therein, wherein each polarizing beam splitter and dichroic filter reflects at least one of said light components and transmits at least another of said light components and a plurality of LCD panels, each LCD panel generating a light-component-specific image associated with one of said light components; and
- (c) a projection lens for projecting an image combined from the light-component-specific images from the LCDs.

--100 (Amended Once). A polarization converter for use with a light source that generates a light beam having at least two light components, comprising an optics array capable of separating said light beam into at least one light component polarized differently than another light component, wherein said one light component and said another light component are within a single said light beam, wherein said optics array has a first dichroic filter and a second dichroic filter

complimentary to said first dichroic filter, wherein said optics array includes a polarizing beam splitter and said light beam passes through said beam splitter before passing through one of said dichroic filters.